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generating data for color matching based on the selected calorimetric

data.

REMARKS

Claims 1-21 remain in this application. Claims 1, 8, 14, 16, 18 and 20, the independent claims, have been amended to define still more clearly what Applicant regards as his invention.

Claims 1-21 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 5,453,066 (Shiraiwa et al.).

Independent Claim 8 is directed to an image processing method, in which, similarly, a plurality of sets of colorimetric data which correspond to respective light sources, are obtained, and a viewing condition is inputted. Then, colorimetric data is selected from the plurality of sets of colorimetric data in accordance with the relation between input viewing condition and a viewing condition of each light source, and data for color matching corresponding to the input viewing condition is generated, based on the selected colorimetric data..

Among other important features of Claim 8, are that (1) colorimetric data is selected from plural sets of colorimetric data which correspond to respective light sources in accordance with a relation between an input viewing condition and a viewing condition of each light source, for example, colorimetric data of a light source is selected because its viewing condition is similar to the input viewing condition, and (2) color matching data corresponding to the input viewing condition is generated based on the selected

colorimetric data. According to this method, the color matching data corresponding to the input viewing condition is precisely generated by using existed colorimetric data selected in accordance with the mentioned relation, and then precise color matching can be executed by using the color matching data.

The Examiner pointed out that color-signal processing information stored in a storage section 312 of *Shiraiwa* is equal to colorimetric data of the present invention, as described in col. 5, lines 25-40, and conjecture of colorimetric data of the present invention corresponds to generation of the color-signal processing information as described in col. 6, lines 12-40. However, the color-signal processing information is a conversion matrix, as shown in equation (2), for converting image data $X_1Y_1Z_1$ into $X_2Y_2Z_2$, in other words, the color-signal processing information is similar to the color matching data to be generated in the present invention. It is apparent that selection of the color-signal processing information is different from selection of the colorimetric data. Further, *Shiraiwa* does not teach selection of the present invention that selects colorimetric data from the plural sets of colorimetric data in accordance with the relation between the input viewing condition and a viewing condition of each light source.

Shiraiwa relates to image processing in which color matching is performed in a manner intended to produce the desired appearance regardless of ambient light. The image data representing an input image is subjected to a color conversion processing. This conversion processing is based on image data obtained from the source of the image data of interest, under standard light source illumination. A reference white that is determined as

of the time of observation of the resulting image (i.e., the light illumination that will be used to view the final product) is used for a further color conversion of the image data.

The Office Action asserts that the selection step recited in Claim 8 corresponds to a signal converter 304 and a process described in col. 5, lines 25-40, of *Shiraiwa*. After careful study, however, Applicant believes that this assertion is based on a misunderstanding of either *Shiraiwa* or the method of Claim 8. *Shiraiwa* uses a storage section 312 to store plural conversion matrices corresponding to various viewing conditions, and the signal converter 304 cited in the Office Action selects one of those conversion matrices in accordance with an output from a sensor 310. In other words, the *Shiraiwa* apparatus selects a matrix corresponding to a viewing condition. this, however, is not seen to teach or suggest performing a selection of *colorimetric data* corresponding to a viewing condition.

Applicant also notes the citation in the Office Action of an output of a converter 302 as corresponding to colorimetric data. The converter 302 outputs XYZ data to which RGB data outputted from a scanner 301 is converted. In other words, the output of the converter 302 is *image data* representing an original to be subjected to color matching, and not colorimetric data.

Accordingly, Applicant submits that nothing in *Shiraiwa* would teach or suggest the selecting step of Claim 8, and believes that that claim is clearly allowable over that patent.

Independent Claim 1 is directed to an image processing method, in which a plurality of sets of colorimetric data which correspond to respective light sources, are

obtained, and a viewing condition is inputted. Then, colorimetric data is selected from the plurality of sets of colorimetric data in accordance with a relation between the input viewing condition and a viewing condition of each light source, and colorimetric data corresponding to the input viewing condition is conjectured based on the selected colorimetric data.

Among other important features of the method of Claim 1, therefore, are that (1) colorimetric data is selected from plural sets of colorimetric data which correspond to respective light sources in accordance with a relation between an input viewing condition and a viewing condition of each light source, and existing colorimetric data of a light source is selected because its viewing condition is similar to the input viewing condition, and (2) colorimetric data corresponding to the input viewing condition is conjectured based on the selected colorimetric data. According to this method, the colorimetric data corresponding to the input viewing condition is conjectured by using existing colorimetric data selected in accordance with the above relation. For example, the conjectured colorimetric data will be used in color matching to obtain color-matching data suited to the input viewing condition.

Claim 1 is also believed to be clearly allowable over *Shiraiwa*, for reasons similar to those discussed above with relation to Claim 8.

The other independent claims are each apparatus or program product claims respectively corresponding to method Claim 1 or 8, and are believed to be patentable for at least the same reasons as discussed above in connection with the latter claims.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. In any event, however, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, he is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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VERSION MARKED TO SHOW CLAIM CHANGES

1. (Twice Amended) An image processing method comprising the steps of:

obtaining a plurality of sets of colorimetric data which correspond to respective light sources;

inputting a viewing condition;

selecting colorimetric data from the plurality of sets of colorimetric data in accordance with relation between the input viewing condition and a viewing condition of each light source; and

conjecturing colorimetric data corresponding to the input viewing condition based on the selected colorimetric data.

8. (Twice Amended) An image processing method comprising the steps of:

obtaining a plurality of sets of colorimetric data which correspond to respective light sources;

inputting a viewing condition;

selecting colorimetric data from the plurality of sets of colorimetric data in accordance with the relation between input viewing condition and a viewing condition of each light source; and

generating data for color matching corresponding to the input viewing condition based on the selected colorimetric data.

14. (Twice Amended) An image processing apparatus comprising:
an obtaining section, arranged to obtain a plurality of sets of colorimetric data which correspond to respective light sources;
an inputting section, arranged to input a viewing condition;
a selector, arranged to select colorimetric data from the plurality of sets of colorimetric data in accordance with relation between the input viewing condition and a viewing condition of each light source; and
a conjecturing section, arranged to conjecture colorimetric data corresponding to the input viewing condition based on the selected colorimetric data.

16. (Twice Amended) An image processing apparatus comprising:
an obtaining section, arranged to obtain a profile having a plurality of sets of colorimetric data which correspond to respective light sources;
an inputting section, arranged to input a viewing condition;
a selector, arranged to select colorimetric data from the plurality of sets of colorimetric data in accordance with relation between the input viewing condition and a viewing condition of each light source; and

a generator, arranged to generate data for color matching
corresponding to the input viewing condition based on the selected colorimetric data.

18. (Twice Amended) A computer program product storing a computer readable medium having computer program codes, for an image processing method, said product comprising process procedure codes for:

obtaining a plurality of sets of colorimetric data which correspond respectively light sources;

inputting a viewing condition;

selecting colorimetric data from the plurality of sets of colorimetric data in accordance with relation between the input viewing condition and a viewing condition of each light source; and

conjecturing colorimetric data corresponding to the input viewing condition based on the selected colorimetric data.

20. (Twice Amended) A computer program product storing a computer readable medium having computer program codes, for an image processing method performing color process on input image data based on a color appearance model, said product comprising process procedure codes for:

obtaining a profile having a plurality of sets of colorimetric data which correspond to respective light sources;

inputting a viewing condition;
selecting colorimetric data from the plurality of sets of colorimetric
data in accordance with relation between the input viewing condition and a viewing
condition of each light source; and
generating data for color matching based on the selected colorimetric
data.

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